United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street Building 201
Richmond, CA 94804

Date: 5/27/2016

Subject: Analytical Testing Results - Project R16N02
SDG: 16124A

From: Peter Husby, Director
EPA Region 9 Laboratory
EMD-3-1

To: Eugene E. Bromley
NPDES Permits Section
WTR-2-3

Attached are the results from the analysis of samples from the **Southern California Oil Platforms Spring 2016** project. These data have been reviewed in accordance with EPA Region 9 Laboratory policy.

A full documentation package for these data, including raw data and sample custody documentation, is on file at the EPA Region 9 Laboratory. If you would like to request additional review and/or validation of the data, please contact Eugenia McNaughton at the Region 9 Quality Assurance Office.

If you have any questions, please ask for Richard Bauer, the Lab Project Manager at (510)412-2300.

Electronic CC: Colby Tucker, Enforcement, Water Section
Susan Zaleski, BOEM
James Salmons, BSEE

Analyses included in this report:

Metals by ICP	Semivolatile Organic Compounds by GC/MS
Abalone Toxicity	

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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eugene E. Bromley	**NPDES Permits Section**	**SDG:** 16124A
Project Number: R16N02	**75 Hawthorne Street**	**Reported:** 05/27/16 15:00
Project: Southern California Oil Platforms Spring 2016	**San Francisco CA, 94105**	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
Platform A	1605002-01	Water	05/02/16 07:25	05/03/16 10:00
Platform B	1605002-02	Water	05/02/16 09:40	05/03/16 10:00

SDG ID 16124A

Work Order(s)

1605002

Samples were received at 13 degrees C, which is above the recommended temperature range of >0 to 6 degrees C.

Oil and Grease samples received with this sample shipment were transferred to Curtis and Tompkins Laboratory , Berkeley.

Whole Effluent Toxicity Testing: Requested WET analysis was abalone development toxicity test using *Haliotis rufescens* (red abalone) following Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms, EPA/600/R-95/136 and USEPA Region 9 Laboratory SOP #1004, RED ABALONE (*Haliotis rufescens*) LARVAL DEVELOPMENT TOXICITY TEST. A concurrent reference toxicity test was conducted for quality control as specified in the method. Statistical analyses were conducted using the CETIS statistical database program, version 1.9.0.8 for the reference toxicity test and produced water toxicity tests.

The test concentrations were based on the oil platform NPDES general permit requirements using the Test of Significant Toxicity (TST) approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010). The chronic WET permit limit that must be met is rejection of the null hypothesis (Ho). Platforms A and B results rejected the null hypothesis and are reported as Pass .

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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1605002-01									**Water - Sampled: 05/02/16 07:25**
Sample ID: Platform A									**Total Metals by EPA 200 Series Methods**
Chromium		ND	U	100	ug/L	B16E047	05/12/16	05/19/16	200.7
Copper		ND	U	100	"	"	"	"	200.7
Zinc		ND	U	100	"	"	"	"	200.7
Sample ID: Platform A									**Semivolatile Organic Compounds by EPA Method 8270D**
Benzo(a)anthracene		ND	A2, J, U	9.8	"	B16E018	05/04/16	05/06/16	8270D
Chrysene		ND	U, A2, J	9.8	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	U, A2, J	9.8	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	U, A2, J	9.8	"	"	"	"	8270D
Benzo(a)pyrene		ND	A2, U, J	9.8	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	U, A2, J	9.8	"	"	"	"	8270D
Surrogate: Terphenyl-d14			88 %	*47-130%*		"	"	"	
Sample ID: Platform A									**Aquatic Toxicity Test by EPA Methods**
Test of Significant Toxicity		Pass	A2		%	B16E103	05/03/16	05/03/16	TOX_SOP1004
Lab ID: 1605002-02									**Water - Sampled: 05/02/16 09:40**
Sample ID: Platform B									**Semivolatile Organic Compounds by EPA Method 8270D**
Benzo(a)anthracene		ND	U, A2, J	10	ug/L	B16E018	05/04/16	05/06/16	8270D
Chrysene		ND	U, A2, J	10	"	"	"	"	8270D
Benzo(b)fluoranthene		ND	U, A2, J	10	"	"	"	"	8270D
Benzo(k)fluoranthene		ND	U, A2, J	10	"	"	"	"	8270D
Benzo(a)pyrene		ND	U, A2, J	10	"	"	"	"	8270D
Dibenz(a,h)anthracene		ND	U, A2, J	10	"	"	"	"	8270D
Surrogate: Terphenyl-d14			113 %	*47-130%*		"	"	"	
Sample ID: Platform B									**Aquatic Toxicity Test by EPA Methods**
Test of Significant Toxicity		Pass	A2		%	B16E103	05/03/16	05/03/16	TOX_SOP1004

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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B16E018 - 3520C CLLE - SVOCs										**Prepared: 05/04/16 Analyzed: 05/06/16**
										Semivolatile Organic Compounds by EPA Method 8270D - Quality Control
Blank (B16E018-BLK1)										
Benzo(a)anthracene	ND	U	1	ug/L						
Chrysene	ND	U	1	"						
Benzo(b)fluoranthene	ND	U	1	"						
Benzo(k)fluoranthene	ND	U	1	"						
Benzo(a)pyrene	ND	U	1	"						
Dibenz(a,h)anthracene	ND	U	1	"						
Surrogate: Terphenyl-d14	*58.7*			"	*50.0*		117	*47-130*		
LCS (B16E018-BS1)										
Benzo(a)anthracene	10.5		1	ug/L	10.0		105	67-110		200
Chrysene	10.7		1	"	10.0		107	67-111		200
Benzo(b)fluoranthene	9.97		1	"	10.0		100	60-110		200
Benzo(k)fluoranthene	11		1	"	10.0		110	65-117		200
Benzo(a)pyrene	9.04		1	"	10.0		90	56-110		200
Dibenz(a,h)anthracene	8.87		1	"	10.0		89	59-119		200
Surrogate: Terphenyl-d14	*58.4*			"	*50.0*		117	*47-130*		
Matrix Spike (B16E018-MS1)		**Source: 1605002-01**								
Benzo(a)anthracene	107		10	ug/L	100	ND	107	60-120		20
Chrysene	105		10	"	100	ND	104	60-120		20
Benzo(b)fluoranthene	106		10	"	100	ND	105	59-119		20
Benzo(k)fluoranthene	104		10	"	100	ND	104	59-119		20
Benzo(a)pyrene	89.4		10	"	100	ND	89	46-110		20
Dibenz(a,h)anthracene	78.8		10	"	100	ND	79	60-120		20
Surrogate: Terphenyl-d14	*522*			"	*502*		104	*47-130*		
Matrix Spike Dup (B16E018-MSD1)		**Source: 1605002-01**								
Benzo(a)anthracene	101		10	ug/L	99.8	ND	101	60-120	6	20
Chrysene	101		10	"	99.8	ND	101	60-120	4	20
Benzo(b)fluoranthene	102		10	"	99.8	ND	102	59-119	3	20
Benzo(k)fluoranthene	102		10	"	99.8	ND	102	59-119	2	20
Benzo(a)pyrene	87.4		10	"	99.8	ND	88	46-110	2	20
Dibenz(a,h)anthracene	81.4		10	"	99.8	ND	81	60-120	3	20
Surrogate: Terphenyl-d14	*469*			"	*499*		94	*47-130*		
Batch B16E047 - 200 Series Digest - Metals by 200.7,Total										**Prepared: 05/12/16 Analyzed: 05/19/16**
										Total Metals by EPA 200 Series Methods - Quality Control
Blank (B16E047-BLK1)										
Chromium	ND	U	10	ug/L						
Copper	ND	U	10	"						

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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B16E047 - 200 Series Digest - Metals by 200.7,Total										**Prepared: 05/12/16 Analyzed: 05/19/16**
										Total Metals by EPA 200 Series Methods - Quality Control
Blank (B16E047-BLK1)										
Zinc	ND	U	10	"						
LCS (B16E047-BS1)										
Chromium	388		10	ug/L	400		97	85-115		200
Copper	305		10	"	300		102	85-115		200
Zinc	212		10	"	200		106	85-115		200
Matrix Spike (B16E047-MS1)		**Source: 1605002-01**								
Chromium	358		100	ug/L	400	ND	89	70-130		20
Copper	287		100	"	300	ND	96	70-130		20
Zinc	209		100	"	200	ND	104	70-130		20
Matrix Spike Dup (B16E047-MSD1)		**Source: 1605002-01**								
Chromium	355		100	ug/L	400	ND	89	70-130	0.7	20
Copper	283		100	"	300	ND	94	70-130	1	20
Zinc	205		100	"	200	ND	103	70-130	2	20
Batch B16E103 - - General Biology - Toxicity, Abalone										**Prepared & Analyzed: 05/02/16**
										Aquatic Toxicity Test by EPA Methods - Quality Control
Reference (B16E103-SRM1)										
EC 50	53.7			ppb	52.7		102	56.2-143.8		

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Qualifiers and Comments

Pass	Pass
J	The reported result for this analyte should be considered an estimated value.
A2	The sample was received above the recommended temperature range.
U	Not Detected
NR	Not Reported
RE1, RE2, etc:	Result is from a sample re-analysis.